IN THE CLAIMS

The following listing of the claims is provided in accordance with 37 C.F.R §1.121:

1.   (currently amended)   A communications network ~~100~~, comprising:

a plurality of nodes including at least one earth station, ~~14, 16~~ and

at least one spacecraft ~~12~~, wherein said spacecraft ~~12~~ comprises an active node of said network ~~100~~ <u>and wherein the active node is dynamically reconfigurable to support open system interconnection (OSI) modeled communication.</u>

2.   (currently amended)   The network ~~100~~ of claim 1, wherein said ~~spacecraft~~ active node ~~12~~ includes a physical layer ~~312~~ and a link layer ~~314~~ conforming to a protocol of an OSI reference model.

3.   (currently amended)   The network ~~100~~ of claim 2, wherein said ~~spacecraft~~ active node ~~12~~ further includes a network layer ~~316~~ conforming to <u>the</u> ~~an~~ OSI reference model.

4.   (currently amended)   The network ~~100~~ of claim 3, wherein said ~~spacecraft~~ active node ~~12~~ further includes a transport layer ~~318~~ conforming to <u>the</u> ~~an~~ OSI reference model.

5.   (currently amended)   The network ~~100~~ of claim 4, wherein said ~~spacecraft~~ active node ~~12~~ further includes an application layer ~~320~~ conforming to <u>the</u> ~~an~~ OSI reference model.

6.   (currently amended)   The network ~~100~~ of claim 1, wherein said ~~spacecraft~~ active node ~~12~~ comprises a node operating system (nodeOS) and at least one <u>node</u> execution environment (EE).

7.   (currently amended)   The network ~~100~~ of claim 1<u>, comprising</u> ~~including~~ a terrestrial data link ~~19~~.

8.   (currently amended)   The network ~~100~~ of claim 7, wherein said terrestrial data link ~~19~~ comprises a Public Switched Telephone Network.

9.   (currently amended)   The network ~~100~~ of claim 7, wherein said terrestrial data link ~~19~~ comprises a wireless data link.

10.   (currently amended)   The network ~~100~~ of claim 1, wherein said earth station ~~14, 16~~ is configured to transmit at least one object ~~210~~ to said ~~spacecraft~~ active node ~~12~~.

11.   (currently amended)   The network ~~100~~ of claim 2, wherein said physical layer ~~312~~ and said link layer ~~314~~ of said ~~spacecraft~~ active node ~~12~~ are configured to communicate with said earth station node ~~14, 16~~ using a <u>transfer control protocol – internet protocol (TCP/IP)</u> transmission protocol.

12.   (currently amended)   The network ~~100~~ of claim 11, wherein TCP/IP protocol is transmitted using <u>asynchronous transfer mode (ATM)</u> techniques.

13.   (currently amended)   A method for dynamically configuring a spacecraft to function as an active node of a communications network, the method comprising ~~the steps of~~<u>:</u>

transmitting an object from an earth station to said spacecraft, said object comprising at least one method for configuring said spacecraft to include a node operating system and at least one execution environment <u>and wherein said spacecraft is dynamically reconfigurable to support open system interconnection modeled communication.</u>

14.　　(currently amended)　A method for dynamically configuring a ~~spacecraft~~<u>satellite</u> to communicate over a network comprising at least one earth station and at least one ~~spacecraft~~<u>satellite</u> in accordance with an OSI reference model, the method comprising ~~the steps of~~:

<u>transmitting an object from an earth station to a satellite, said object comprising data conforming to at least one protocol and comprising executable code for implementing said protocol at said satellite;</u>

<u>receiving said object at said satellite;</u>

<u>extracting at least said executable code from said object at said satellite;</u>

<u>temporarily storing at least said executable code in memory at said satellite;</u>

<u>dynamically reconfiguring the satellite to support the OSI reference model; and</u>

<u>executing said code for implementing at least one layer of the OSI reference model.</u>

~~transmitting an object from a node selected from the group consisting of an earth station and a spacecraft, to said spacecraft, said object comprising data conforming to at least one protocol, and at least one method comprising executable code for implementing said protocol of said data;~~

~~at said spacecraft, receiving said object;~~

~~at said spacecraft, extracting at least said executable code from said object;~~

~~at said spacecraft, temporarily storing at least said executable code in memory;~~

~~at said spacecraft, executing said code for implementing at least one layer of an OSI reference model.~~

15.   (currently amended)   The method according to claim 14, wherein said at least one layer comprises a physical layer and a data link layer.

16.   (currently amended)   The method according to claim 14, wherein said at least one layer comprises a network layer.

17.   (currently amended)   The method according to claim 14, wherein said at least one layer comprises a transport layer.

18.   (currently amended)   The method according to claim 14, wherein said at least one layer comprises an application layer.

19.   (currently amended)   The method according to claim 14, wherein the step of executing said executable code includes the step of adapting said network layer for at least one of internet protocol and asynchronous transfer mode protocol.

20.   (currently amended)   The A method according to claim 14, wherein said step of executing said executable code includes at least one of the steps of data fusion and packet dropping.

21.   (currently amended)   A communications network ~~100~~ comprising: ~~including~~

at least one dynamically reconfigurable spacecraft node ~~12~~ and at least one earth station node ~~14,16~~, wherein said earth station node ~~14~~ is configured to transmit to said spacecraft node and wherein the spacecraft node is configurable to support an OSI reference model; and ~~12~~

at least one object ~~210~~ comprising data ~~212~~ and a protocol ~~214~~ associated with said data ~~212~~, said protocol including information defining at least one node ~~16~~ of said network ~~100~~ to which said data ~~212~~ is to be forwarded from said spacecraft node ~~12~~.